

Application No. 10/591,622
Reply Dated August 7, 2009
Reply to Office Action Dated May 7, 2009

Remarks

Claims 1-20 are pending.

Claims 1-20 are submitted herein for review.

No new matter has been added.

In the Office Action, the Examiner has rejected claims 1-20 under 35 U.S.C. 112, second paragraph. Applicant responds as follows. Claim 1 covers a non linear filler including a large majority of homogeneous powder, at least 97% by weight of zinc oxide in the non linear filler, the remainder, less than 3% by weight of the filler being at least one metal oxide as traces. As explained in the present application [0016], the non linear filler is a homogenous powder of zinc oxide having at least one metal oxide, each metal oxide being present either naturally within the zinc oxide and/or from the application of the filler production method. As such, the presence of the metal oxide as traces is scattered in a powder of homogeneous fine structure of zinc oxide [0092].

Turning to the substantive rejection, the Examiner has rejected claims 1-3, 5-7, 9, 12-18 and 20 under 35 U.S.C. 103(a) as being unpatentable over Kemp et al. Applicant respectfully disagrees with the Examiner's assertion and submits the following remarks in response.

Independent claim 1 is directed to an electric field control material including a polymer matrix in which is dispersed a so-called non-linear filler having non-linear electric resistance properties, wherein the non-linear filler includes at least 97% by weight of zinc oxide as a

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homogeneous powder, and less than 3% by weight of at least one metal oxide as traces.

The technical problem to be solved by this arrangement is to propose an electrical field control material which is less expensive and is produced less restrictively, while providing a significantly improved breakdown resistance.

The cited prior art, namely, Kemp describes a stress control material including a polymer matrix in which is dispersed a filler based on a varistor powder having non linear electrical resistance properties. The filler is a powder of zinc oxide doped by metallic oxides. More particularly, the filler includes preferably at least 90% by weight of zinc oxide and less than 10% by weight of dopants.

Firstly, a person skilled in the art would have no reason to start with the Kemp reference to solve the above mentioned technical problem so as to yield the material as claimed in claim 1.

Second, contrary to the object of the present application, the stress control material of Kemp is completely in conformity with the prior art disclosed in the present application. It is known that varistor powder includes microstructure having elementary grains partially integral with an inter-granular phase in which doping elements are concentrated, i.e. metal oxides. Thus, a varistor powder according to Kemp *cannot be considered a homogeneous powder* or a structure, the majority of which has distinct grains, or even quasi-exclusively having independent grains and in which the grain boundaries are present in a very small minority, or even quasi absent [0015].

Furthermore, the fact that the zinc oxide in Kemp is doped means that metallic oxides are artificially included into the powder using doping, calcination and/or sintering methods.

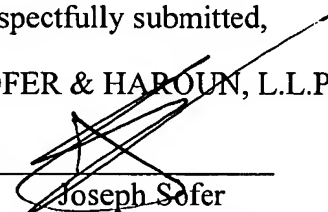
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Therefore, the metal oxides are not present as traces such as defined in [0016] of the present application.

As such, the Kemp reference does not describe all of the elements of claim 1, namely there is no teaching or suggestion of a non linear filler including *at least 97% by weight of zinc oxide as a homogeneous powder and less than 3% by weight of at least one metal oxide as traces.*

In view of the foregoing, Applicant respectfully submits that pending claims 1-20 are in condition for allowance, the earliest possible notice of which is earnestly solicited. If the Examiner feels that an interview would facilitate the prosecution of this Application she is invited to contact the undersigned at the number listed below.

Dated: 8/7/09

Respectfully submitted,
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